

B1
004
also claim priority under 35 U.S.C. §120 of PCT/DE/00102 filed
January 13, 2000. The international application under PCT article
21(2) was not published in English. --

IN THE CLAIMS:

Please add new claims 14-26, as follows:

B2
14. A pneumatic suspension system comprising:

a) a pneumatic suspension bellows made from an elastomer material which has an embedded strength carrier in the form of axially extending thread reinforcements, said pneumatic suspension bellows comprises a dynamic zone and a static zone and forms a variable volume air chamber;

b) a pneumatic suspension cover having a fastening zone with an outside diameter;

c) at least one clamping ring for clamping an end of said pneumatic suspension bellows to said pneumatic suspension cover in said pneumatic suspension cover fastening zone;

d) a pneumatic suspension piston comprising:

i) a fastening zone having a fastening zone diameter;

4B2
cont
ii) a roll off piston zone, having a roll off piston zone diameter;

e) at least one additional clamping ring, wherein an end of said bellows opposite said pneumatic suspension cover, is secured to said pneumatic suspension piston in said second fastening zone, via said at least one additional clamping ring; and

301
C1
f) an outer guide disposed around said pneumatic suspension bellows wherein said outer guide contacts said pneumatic suspension bellows to mark a division between said dynamic zone and said static zone, wherein when pressure is applied to said pneumatic suspension bellows, said dynamic zone of said pneumatic suspension bellows bends to form a rolling fold to change the diameter of said pneumatic suspension bellows as it is being loaded and relieved, with said change occurring with respect to said outside diameter of said roll off piston zone.

15. The pneumatic suspension system as in claim 14, wherein said dynamic zone extends at least partially in a conical form when said pneumatic suspension bellows is in a relatively low pressure state.

16. The pneumatic suspension system as in claim 14, wherein said dynamic zone extends in a substantially conical form when said

int. C1
pneumatic suspension bellows is in a relatively low pressure or pressureless state.

CB2
Cont
17. The pneumatic suspension system as in claim 15, wherein said dynamic zone of said pneumatic suspension bellows has a first conical section, a cylindrical center section and a second conical section wherein said second conical section ends adjacent to said fastening zone of said pneumatic suspension piston.

18. The pneumatic suspension system as in claim 16, wherein said first conical section has a greater expanse than said cylindrical center section.

19. The pneumatic suspension system as in claim 18, wherein said cylindrical center section has a greater expanse than said second conical section.

20. The pneumatic suspension system as in claim 14, wherein when said pneumatic suspension bellows is in a pressureless state, said pneumatic suspension bellows has a diameter that is at least as large as said roll off piston zone diameter and is at most 1.2 times as large as said roll off piston zone diameter.

21. The pneumatic suspension system as in claim 14, wherein when said pneumatic suspension bellows is in a pressureless state,

mt.
said pneumatic suspension bellows has a diameter that is at least 1.05 times as large as said roll off piston zone diameter and is at most 1.15 times as large as said roll off piston zone diameter.

UB2
Com. 4
22. The pneumatic suspension system as in claim 17, wherein said pneumatic suspension bellows changes from said static zone to said dynamic zone without a cylindrical intermediate section.

23. The pneumatic suspension system as in claim 14, wherein said static zone of said pneumatic suspension bellows changes from a substantially conical section to a substantially cylindrical intermediate section which joins said dynamic zone.

24. The pneumatic suspension system as in claim 14, wherein said static zone is in a substantially conical form.

25. The pneumatic suspension system as in claim 14, wherein said outer guide substantially encloses an entire length of said dynamic zone when said pneumatic suspension bellows is in a relieved state.

26. The pneumatic suspension system as in claim 14, wherein said outside diameter of said pneumatic suspension cover fastening zone is larger than said fastening zone diameter of said pneumatic suspension piston. - -